WHAT IS CLAIMED IS:

Claim 1.

A oligosaccharide synthesizer comprising:

a container for storing buffer solution;

a pump for feeding buffer solution;

a sample injector further comprising a container for storing a sugar nucleotide solution and a container for storing glycosyltransferase, said buffer solution used to mix said sugar nucleotide solution and said glycosyltransferase and to inject the mixture into a flow path for feeding said buffer solution;

a reaction tank where a primer is immobilized, said tank used for reaction between solution injected out of said sample injector and said primer;

an ultrafiltration column for separating said glycosyltransferase from sugar nucleotide and nucleotide; and

a collection flow path for feeding said glycosyltransferase flowing out of said ultrafiltration column, into the container for storing glycosyltransferase of said sample injector.

Claim 2.

A oligosaccharide synthesizer comprising:

a plurality of said containers for storing buffer solution;

a plurality of said collection flow paths provided in response to the number of said containers for storing buffer solution; and

a collection flow path switch valve for feeding the solution coming out of said ultrafiltration column into one of said collection flow paths.

Claim 3.

The oligosaccharide synthesizer according to Claim 1 comprising:

said container for storing buffer solution;

said pump;

said reaction tank; and

a circulating flow path switch valve arranged between said ultrafiltration columns in order to switch between the flow paths of various sections;

said circulating flow path switch valve characterized by switching between a first flow path for circulation through the reaction tank, circulating flow path switch valve, pump, sample injector and reaction tank; and a second flow path for circulation through the buffer solution container, circulating flow path switch valve, pump, sample injector, reaction tank and ultrafiltration column.

Claim 4.

A oligosaccharide synthesizer comprising:

a container for storing buffer solution;

a pump for feeding buffer solution;

a sample injector further comprising:

a container for storing a sugar nucleotide solution,

a container for storing a primer, and

a mixing tank for mixing the sugar nucleotide solution with said primer; wherein the solution mixed by said mixing tank being injected into the flow path for feeding said buffer solution by said sample injector;

a reaction tank where a primer is immobilized, said tank used for reaction between solution injected out of said sample injector and said primer;

an ultrafiltration column for separating said primer from sugar nucleotide and nucleotide or oligosaccharide;

a first flow path for feeding the primer coming out of the ultrafiltration column, into the primer container of said sample injector; and

a second flow path for feeding the sugar nucleotide and nucleotide or oligosaccharide coming out of the ultrafiltration column, into a drain.

Claim 5.

The oligosaccharide synthesizer according to Claim

4 comprising:

a plurality of said reaction columns,

a switch valve arranged between a plurality of said reaction columns in order to feed the solution injected out of said sample injector, into any one of the reaction columns.

Claim 6.

The oligosaccharide synthesizer according to Claim 5 characterized in that an enzyme releasing oligosaccharide form said primer is immobilized on one of said reaction columns.

Claim 7.

The oligosaccharide synthesizer according to Claim 6 characterized in that, after solution has passed through the reaction column where said oligosaccharide release enzyme is immobilized, a oligosaccharide is collected from said drain.